

What is claimed is:

1. An image data collecting device for analysis of material structure, comprising:

a flexible belt which is formed in ring shape and conveyed in the long direction thereof,

an accumulated fluorescent sheet which is formed in ring shape commensurate with the configuration of said flexible belt and mounted on said flexible belt and where a radiant image data from a material to be analyzed is recorded,

a recording means to record said radiant image data into said accumulated fluorescent sheet by irradiating a given radiant ray onto said material,

a reading means to read out said radiant image data by irradiating excitation light,

and

a deleting means to remove radiant energy remaining in said accumulated fluorescent sheet after reading operation by said reading means and before subsequent recording operation by said recording means.

2. The collecting device as defined in claim 1, wherein the maximum area subjected to said radiant ray of said accumulated fluorescent sheet is set equal to the readable area of said radiant image data of said accumulated fluorescent sheet.

3. The collecting device as defined in claim 1, wherein said reading means includes plural reading sections which are arranged in the long direction of said belt.

4. The collecting device as defined in claim 3, wherein said plural reading sections are formed in cylindrical shape.

5. The collecting device as defined in claim 1, further comprising a storing means to store a portion of said accumulated fluorescent sheet and composed of bended portions of said belt and said accumulated fluorescent sheet.

6. The collecting device as defined in claim 5, wherein said storing means is disposed at least one of spaces between said recording means and said reading means and between said recording means and said deleting means.